

REMARKS

Upon entry of the present amendment, claims 1-4 will remain pending in the above-identified application with claims 1-2 standing ready for further action on the merits and claims 3-4 being withdrawn from consideration based upon an earlier Restriction Requirement.

The instant amendment to the specification at page 18 does not incorporate new matter into the application as originally filed. This is because the amendment simply corrects a typographical error that occurred while preparing the US application, and at the same time provides correct inherent property of the composition of Example 2. It is noted that the amendment to page 18 is also consistent with disclosure found throughout the specification and in Figure 1. For example, Figure 1 clearly shows that the x-ray intensity of Example 2 does not have the variability associated with Comparative Example 1, or even Example 1. Likewise, the correction is completely in agreement with disclosure in the Application at page 6, lines 3-5, wherein it is recited that "the resin composite in the present invention has an index Y/X of 0.1 or less. The index Y/X is preferably 0.07 or less, and more preferably 0.04 or less."

Further, the amendment is consistent with disclosure in Japanese patent application JP 11-320987 upon which priority is claimed under 35 USC § 119, and a certified copy of which has been

filed with the USPTO. In support of this contention, Applicant encloses herewith a copy of published JP 2001-200165 which is based on the JP 11-320987 application. A review of paragraph "[0028]" of the enclosed publication evidences that the correction made herein to page 18 of the specification does not constitute new matter.

Accordingly, because the correction to page 18 simply serves to correct a minor typographical error, and at the same time finds support in the original filed Application, for example at page 6 and in Figure 1 (Example 2), as well as JP 11-320987, it follows that the amendment does not incorporate new matter into the application as originally filed.

Prior Restriction Requirement

Applicants affirm their prior election of claims 1-2 for prosecution at present.

Regarding non-elected claims 3-4, Applicants contend that these claims should be rejoined once allowable subject matter is indicated with respect to claims 1-2.

Claim Rejections Under 35 USC § 102

Claims 1-2 have been rejected under 35 USC § 102(b) as being anticipated by Yamada et al. (US 4,491,553). Reconsideration and

withdrawal of this rejection is respectfully requested based on the following considerations.

The Present Invention and Its Advantages

The present invention provides a resin composite comprising a resin and aluminum hydroxide having an average primary-particle diameter of about 50 nm or smaller, wherein said composite has an index Y/X of 0.1 or less provided that the value X is an average value of intensities of aluminum characteristic X-ray measured by scanning a beam on a straight line on the composite with an electron-probe X-ray microanalyzer and the value Y is a standard deviation of the intensities.

In the present invention, an average primary-particle diameter of aluminum hydroxide of about 50 nm or smaller is one of the requirements, an index Y/X of 0.1 or less is another. A resin composite having excellent tensile strength is provided by satisfying these requirements (see Example 1, average primary-particle diameter: 5nm, index Y/X : 0.038, tensile strength 6.8Mpa; Comparative Example 1, average primary-particle diameter: 13nm, index Y/X : 0.116, tensile strength: 4.1Mpa).

Distinctions Over the Cited Art

Yamada '553 (US 4,491,553)

Yamada '553 discloses a method for producing a filler-loaded thermoplastic resin composite. The filler in the composite includes aluminum hydroxide (see, col. 4, lines 32-38 of Yamada '553). The filler usually has an average particle diameter of from 10-50,000nm (see, col. 4, lines 40-43). In the method of Yamada '553, a fibril-forming, i.e. fibrillatable PTFE, is mixed with the thermoplastic resin and the filler (see col. 4, lines 51-53).

In Yamada '553, it is described as follows:

"The advantages obtained with the invention are that the mixing is very smooth, the scattering of the filler is very little, the mixing time is short, the filler-loaded thermoplastic resin composite is very uniform in the dispersion of the filler and the pressure of the resin composite at flange is very stable" (see col. 6, lines 17-22).

Yamada '553 discloses that the resin composite prepared by mixing 90-60 parts of resin (such as polypropylene), 10-40 parts of filler (such as Talc) having an average particle diameter of about 8 μ m and 0 or 0.5 parts of fibrillatable PTFE, and evaluations of filler dispersion in all resin composites give the same results, i.e. "good" (see Table 2, Experiment No. 10-15). The dispersion evaluation was conducted visually (see col. 9, lines 7-8 of Yamada '553).

According to above mentioned disclosure, Yamada clearly teach that the degree of filler dispersion in a filler-loaded resin composition with fibrillatable PTFE is the same as that without fibrillatable PTFE, and the addition of fibrillatable PTFE does not

necessarily improve filler dispersion in a filler-loaded resin composite.

On the other hand, a resin composite of the present invention can be provided, for example, by a method comprising the steps of mixing an aqueous resin emulsion containing a resin with aluminum hydroxide having an average primary-particle diameter of 50nm or smaller, letting the resin and the aluminum hydroxide therein aggregate to obtain a slurry containing the resin composite and separating the composite from the slurry (see page 6, lines 11-18, and page 7, lines 19-23 of the present specification).

A resin composite of the present invention, as shown in Comparative Example 1, can hardly be provided by the method of Yamada '553 (the method of mixing a resin in particulate form such as powders, granules, beads, pellets, with filler and fibrillatable PTFE).

Therefore, a filler-loaded resin composition including fibrillatable PTFE disclosed by Yamada is considered to have an index more than 0.1.

In order to provide further evidence of the above fact, the present inventor prepared a resin composite, in reference to Yamada's method as cited above, by the method of mixing with styrene-butadiene rubber, aluminum hydroxide having an average particle diameter of 13nm and fibrillatable PTFE, and evaluate the index of the obtained resin composite. The obtained resin

composite had an index of more than 0.1. (See the enclosed 37 CFR Declaration of Mr. Satoru Nippa, the present inventor.)

As above-mentioned, the resin composite of the present invention is clearly different from the resin composite disclosed in Yamada '553 in respect to an index Y/X.

Accordingly, based on the above considerations and the testing results set forth in the enclosed 37 CFR § 1.132 declaration of Mr. Nippa, it follows that Yamada '553 does not disclose a resin composite as instantly claimed. Accordingly, claims 1-2 are not rejectable under 35 USC § 102(b) as being anticipated by Yamada '553. Further, because Yamada '553 does not imply any of the advantageous effects of the resin composite that is instantly claimed, it also follows that claims 1-2 are not obvious over Yamada '553.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance clearly indicating that claims 1-2 are allowed and rejoined claims 3-4 are allowed.

The Examiner is respectfully requested to enter this Reply After Final in that it raises no new issues. Alternatively, the Examiner is respectfully requested to enter this Reply After Final in that it places the application in better form for Appeal.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 

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JWB/end
2185-0480P

Attachment: Version with Markings to Show Changes Made
37 CFR 1.132 Declaration of Mr. Satoru Nippa

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning on page 18, line 21, has been amended as follows:

As for the obtained molding article, the index Y/X was measured in the same manner as in Example 1. The index Y/X was found to be [0.117] 0.017. The EPMA chart is shown in Fig. 1. The molding article was stamped out with a cutting machine (manufactured by Dumbbell Co., Ltd.) into a specimen having a length of 125 mm, a width of 6.5 mm and a thickness of 3 mm. An oxygen index of this specimen was measured with an oxygen index system combustion tester (model: ON-1, manufactured by Toyo Rika Kogyo Ltd.) in accordance with JIS-K7201. The oxygen index was found to be 23.